

CLAIMS

Cancel claims 2, 4, 6, and 8 – 16 and add the new claims starting with 17.

1. (currently amended) A method of locating at a central processor a signal receiver comprising
using four signal receivers each at a different location to receive a plurality of multiple frequency input signals originating from an unknown origin transmitter, wherein said signal receivers are of known physical location except for one which is at an unknown location,
finding a difference in time of the reception at the central processor of said signals from said transmitter and between each of the signal receivers,
using the differences in time of reception at said signal receivers of known location to locate the origin of said signals from said transmitter, and
using the known location of three sites and the differences in time of reception from the transmitter to at least two signal receivers at known locations and the signal receiver at the unknown location, and determining the location of said signal receiver at said unknown location.
2. (cancelled)
3. (currently amended) The method of claim 21, whereby said signal receivers at known locations are cellular base stations and said unknown-location signal receiver at the unknown location is a cellular handset.
4. (cancel)
5. (currently amended) A signal receiver locating system including a central signal processor comprising:
a plurality of signal transmitters ~~selected from a group consisting of~~ each positioned at an known location sources and unknown location signal sources,
~~a plurality of~~ three or more known location signal receivers,
an additional signal receiver at an unknown location.

said known location signal receivers and said additional signal receiver receiving signals from said signal transmitters,
said central signal processor receiving signals from said ~~known location~~ signal receivers and outputting a set of data, whereby said data is used to locate said signal transmitters and thereafter using information from three known sites. said additional signal receiver.

6. (cancelled)

7. (currently amended) The method of claim 65 whereby said signal receivers at known locations are cellular base stations and said unknown location signal receiver is a cellular handset.

8. (cancel)

9. (cancel)

10. (cancel)

11. (cancel)

12. (cancel)

13. (cancel)

14. (cancel)

15. (cancel)

16. (cancel)

17. (new) The method of determining at a central processing station the location of a cell phone at an unknown location using three cell sites, each at a known location, comprising
receiving signals from at least one transmitter at an unknown location at each of said cell sites and to the cell phone,
causing each of said cell sites and said cell phone to send to said central processing station a representation of said signals from said at least one transmitter,
measuring at said central processing station the difference in time delays to said cell sites and said cell phone of signals received at said cell sites and said cell phone from said at least one transmitter,
using said difference in time delay measurement to locate said at least one transmitter, and,
locating said cell phone using three known locations selected from the locations of said cell sites, and said at least one transmitter.

18. (new) The method of locating at a central processing station a cell phone at an unknown location using at least three cellular base station sites, each at a known location, comprising
receiving signals from at least one transmitter at an unknown location at each of said three cellular base sites and said cell phone causing each of said cellular sites and said cell phone to send data of said signals from said at least one transmitter to said processing station,
measuring the difference in time delays to said cellular sites and said cell phone at said processing station of signals received at said cellular sites and said cell phone from said at least one transmitter and at said processing station locating said at least one transmitters, and,
then using three known locations from the known locations of said at least one transmitter and said three cellular base stations, locating said cell phone.

19. (new) A signal transceiver locating system comprising,
a central processing station,

three or more signal transceivers at sites at known locations,
an additional signal transceiver at an unknown location, and
at least one power transmitter at an unknown location adapted to send signals
to each of said signal transceivers,
said central processor adapted to
receive signals from said signal transceivers and based on time delay
information received in said signals determine the location of said
unknown at least one power transmitter, and
based on the information in said signals and based on the knowledge of
the location of said at least one transmitter, determine the location of
said additional signal transceiver employing the information available
for at least three known sites.

20. (new) A method of locating at a central processor a first signal transceiver
located at an unknown location, comprising
transmitting multiple frequency signals from at least one transmitter at an unknown
location;
receiving at and transmitting signals from at least three transceivers each at a known
location said signals from said at least one transmitter;
determining at said central processor the difference of arrival times at said
transceivers from data representing the transmitted signals sent by said transceivers
to said central processor;
determining the location of said at least one transmitter using three known locations
of transceivers and the differences in arrival times of signals from said at least one
transmitter;
determining the location of said first signal transceiver from differences in arrival
times of said signal using three known locations from the group of known locations of
transceivers and said at least one transmitter.

21. (new) The method of claim 20 in which said three signal transceivers at a
known location are cellular base stations.

22. (new) The method of claim 21 in which said first signal transceiver comprises a cellular handset.
23. (new) A signal transceiver locating system in accordance with claim 19 in which said three or more signal transceivers at sites at known locations comprise cellular base stations.
24. (new) A signal transceiver locating system in accordance with claim 19 in which said signal transceiver initially at the unknown location comprises a cellular phone handset.